

# Egg Oil: An Avian Population Control Tool

The Animal and Plant Health Inspection Service's (APHIS) Wildlife Services (WS) program uses many methods to manage populations of gulls, waterfowl, and other birds in areas where they create problems. Methods include trapping and relocation, surgical sterilization, mechanical scare devices, repellents, and hunting. However, these methods, and others that reduce or prevent eggs from hatching—such as shaking, freezing, adding, nest destruction, and egg removal—are labor intensive and may not be effective in operational programs.

The application of various oils (of mineral and vegetable origin) to eggs during the nesting season to prevent hatching is less labor intensive. In addition, this method has an advantage over nest destruction or egg removal because nesting birds are encouraged to continue incubation, often well beyond the normal time for hatching. With nest destruction or egg removal, birds often renest.

On March 6, 1996, the U.S. Environmental Protection Agency (EPA) published in the *Federal Register* a notice exempting certain materials from regulation under Section 25(b) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended. This notice allowed corn oil to be used without EPA regulation as long as the uses met certain qualifications: they were not related to public health, efficacy data were available, and certain labeling requirements were met.

This tech note addresses the requirements of the March 6, 1996, EPA notice so that corn oil (hereafter referred to as "egg oil") can be used to treat eggs of nesting gulls, waterfowl, and other birds. Egg oil will reduce reproductive success and, therefore, reduce the populations of birds that are causing problems. Laboratory and field studies conducted by WS' National Wildlife Research Center (NWRC) show that egg oil is 95 to 100 percent effective in preventing the hatching of treated eggs. The active ingredient is 100 percent food-grade corn oil.

## Endangered Species Considerations

Before using egg oil, consult with appropriate wildlife authorities to ensure that the use of this product presents no hazard to threatened or endangered species.

It may be necessary to obtain a permit from the U.S. Department of the Interior's U.S. Fish and Wildlife Service and/or the applicable State or local wildlife agency before egg oil can be used. Also, contact the appropriate State regulatory agency to assure that egg oil can be used in the State under a FIFRA Section 25(b) exemption. Obtaining all required permits and licenses is the responsibility of the applicator.

## General Information

Egg oil must be used as described in this tech note to conform to the FIFRA Section 25(b) exemption requirements specified by EPA. **A copy of this tech note must be in possession of any individual applying egg oil.** When applied to incubating eggs, egg oil blocks the pores in the eggshells and asphyxiates the developing embryo. Because the eggs are not otherwise disturbed, incubating birds will generally continue incubation to the expected hatching date and beyond, preventing or reducing the potential for renesting.

## Obtaining Egg Oil

Applicators can obtain egg oil from any retail or wholesale supplier of groceries or baking or cooking supplies. Any commercially available brand of 100 percent food-grade corn oil may be used. Other pure vegetable oils and vegetable oil mixtures are not covered by this tech note and may not meet the EPA exemption authorized by Section 25(b) of FIFRA.

## Equipment

Egg oil may be applied to incubating eggs by any means that allows about the same amount of oil to be applied to each egg without excessive contamination of the nest and surrounding area. The most effective application equipment is a pressurized back-pack or hand-held sprayer that holds from 1 to 2 gallons of egg oil. Sprayers should be pressurized between 15 lb/in<sup>2</sup> and 40 lb/in<sup>2</sup> and should be calibrated to deliver between 3 to 6 ml/sec. The spray wand should contain a tip that produces a fan or circular pattern.

## Application

Monitor the breeding and nesting activity of birds targeted for treatment with egg oil. To be most effective, application of egg oil should be made between the fifth day after the laying of the last egg in a clutch and at least 5 days before anticipated hatching. Treat all eggs in a nest at the same time, and do not move or turn eggs. For colonial nesting birds, such as

gulls, newly completed clutches may have to be treated at 10-day intervals to assure complete coverage. For pressurized sprayers, place the wand tip from 6 to 8 inches above each egg and apply an appropriate amount of egg oil. The amount of egg oil used varies with egg size. Treat goose eggs with approximately 7 ml/egg oil per egg and gull eggs with 2 ml/egg.

## **Storage and Disposal**

Store oil in the original container. Recycle containers or dispose of them in an appropriate landfill.

## **Potential Hazards**

Hazards to applicators are not expected unless the person is allergic to corn oil. Because egg oil applied to the eggs of any bird results in embryo death, applicators should take care to identify and mark the nests of nontarget birds in mixed colonies so nontarget species are not treated. Do not spray or apply egg oil to anything other than eggs. Do not apply directly to water.

## **Further Information**

Additional information on this product can be found in the April 1994 ADC Final Environmental Impact Statement (Appendix P), in Material Safety Data Sheets supplied by the Pocatello Supply Depot, and in the 1995 Handbook on Prevention and Control of Wildlife Damage. Specific information on this product can be obtained through NWRC (970) 266-6000 or through the NWRC Web site <http://www.aphis.usda.gov/ws/nwrc>. For further information about the availability of this product, contact your WS State Director, or the Pocatello Supply Depot at:

USDA, APHIS, WS  
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238 Dillon Street  
Pocatello, ID 83201  
Telephone: (208) 236-6920  
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